

# Chapter 1

## Purpose and Need

### Introduction

Forest land and resource management planning is a process for developing, amending, and revising land and resource management plans (forest plans) for each of the National Forests in the National Forest System. Forest plans are required by the [National Forest Management Act](#) (NFMA) of 1976. Each forest plan is intended to guide the management of a National Forest for a 10-15 year period, at the end of which a formal revision is required.

The 17-million acre Tongass National Forest, the largest forest in the National Forest System, was also the first to complete a Land and Resource Management Plan under the [National Forest Management Act](#). The original Tongass Forest Plan was approved in 1979, and has been amended twice (in 1986 and 1991). The first revision of this plan is now being considered.

A [draft environmental impact statement](#) (DEIS) documenting the [environmental analysis](#) for this revision was released for public review in June 1990. In November 1990, the [Tongass Timber Reform Act](#) (TTRA) was passed. This Act imposed several new requirements for management of the Tongass affecting the Forest Plan and resulted in the preparation of a Supplement to the DEIS, which was released in August 1991. (This Supplement is hereinafter referred to as the "1991 SDEIS.") TTRA made permanent changes to Forest Plan [land allocations](#) and standards and guidelines which applied to all [alternatives](#) in the Supplement. The 1991 SDEIS was in turn followed by the Revised Supplement in 1996. The Revised Supplement was necessitated by new information and analysis relevant to several important issues.

The release of a final [environmental impact statement](#) (FEIS) and decision had been scheduled for early 1993, but was put on hold in order to conduct the additional analysis which ultimately led to the Revised Supplement. A 1992 draft version of this FEIS included [alternatives](#) that became the basis of some Revised Supplement and FEIS alternatives. See Chapter 2.

This FEIS analyzes in detail 10 alternatives for future management of the Tongass National Forest. A separate document, the Land and Resource Management Plan (Forest Plan), is an expansion of the Preferred Alternative (Alternative 11) contained in this FEIS.

The actions preceding issuance of this FEIS have included identifying [public issues](#) (discussed later in this chapter and in Appendix A), developing criteria (guidelines) for use in assembling and analyzing data and information, and collecting and analyzing this data. The result was the "analysis of the management situation" (AMS) which examined, in detail, the historical trends, current situation, and supply and [demand](#) features of the resources and uses of the Tongass National Forest. (The Analysis of the Management Situation, Tongass National Forest, January 1990, is a separate document incorporated here by reference.) Both the public issues and the AMS have been updated based on analysis completed since passage of the [Tongass Timber Reform Act](#) (TTRA) (updated in the 1991 SDEIS) and completion of the public comment periods on the 1990 DEIS and 1991 SDEIS (updated in the 1996 Revised Supplement).

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This environmental impact statement is tiered to the EIS for the Alaska Regional Guide, which establishes Regional standards and guidelines and distributes targets from the National Resources Planning Act program to the forests. ("Tiering" is the process under the [National Environmental Policy Act](#) of relying on programmatic or "higher-level" environmental analyses for the treatment of general matters and focusing on more specific matters in the subsequent analysis.). [Environmental analysis](#) for projects will in turn tier to this, the Tongass Land Management Plan Revision EIS.

The Regional Forester, in the Record of Decision, has selected [Alternative 11](#), the Preferred Alternative, as the Tongass Forest Plan. This revised Forest Plan replaces all current Tongass Forest Plan direction. (See Chapter 5, "Implementation," in the Forest Plan.)

The "purpose and need" for the Tongass Forest Plan Revision, beyond the basic NFMA requirement for periodically revising forest plans, centers on the basic elements of what constitutes a forest plan. These plan elements include: multiple-use [goals](#) and objectives, [management prescriptions](#), standards and guidelines, timber suitability, the [Allowable Sale Quantity](#), and [monitoring](#) and [evaluation](#). Together these are evaluated to determine the "need for change." (For the 1991 SDEIS, requirements of the [Tongass Timber Reform Act](#) affecting forest planning became additional needs for change. These are discussed in applicable sections of Chapter 3, especially "Fish," "[Roadless areas](#)," "Timber," and "[Wilderness](#).")

## Need for Change

The need for change is based on the results of [monitoring](#) and [evaluation](#), an assessment of current direction, new information, resource supply potentials and projections of [demand](#), and [public issues](#) and [management concerns](#). Examples are: changes in market conditions or resource demands; shifts in public values; and new information about the Forest's resources and their interrelationships.

Six categories of planning direction from the current Tongass Land Management Plan that might need changing were identified (Chapter 7: The Need for Change, The Analysis of the Management Situation, Tongass National Forest, January 1990). These are described briefly here, and explained in more detail in Chapters 2 and 3.

1. [Multiple-use goals and objectives](#). The goals and objectives of the Tongass Land Management Plan were developed in 1979, and updated in 1986. Forest management is dynamic, and changes in public views, resource uses and demands, and natural resource knowledge require periodic re-evaluation of multiple-use goals and objectives.
2. [Management prescriptions](#). The current Tongass Land Management Plan uses four broad [Land Use Designations](#), with several variations, to allocate land areas to different types of management (such as [Wilderness](#), or emphasis on [timber production](#)). More specific management prescriptions, which have become the standard in more recent Forest Plans nationally, were not used in 1979. Such prescriptions (groups of coordinated [management directions](#) applied to specific areas of land) needed to be developed and evaluated for the Tongass.
3. [Standards and Guidelines](#). Standards and guidelines specify how projects and activities are to be carried out to satisfy multiple resource needs. Resource management policies for projects and activities to be carried out under the current Tongass Plan were first contained in the

Southeast Alaska Area Guide. Many of these later became Region-wide standards and guidelines in the Alaska Regional Guide. Standards and guidelines have also been included in project implementation documents, and have been developed as a part of Regional direction in the form of handbooks, manual supplements and a Forest Plan amendment. The Tongass Plan Revision provides an opportunity to aggregate this direction into a Forest-specific package, and to validate, update and add to these existing standards and guidelines.

4. **Timber Suitability.** Under the Tongass Land Management Plan, lands were made available for a variety of uses including [timber production](#). The methodology for determining the location of suitable lands for timber production (the “suitable” land base) was different than it is now. Revising the Forest Plan provides an opportunity to better identify suitable lands for timber management using current methodology.
5. **Allowable Sale Quantity.** The current Tongass Plan established an Allowable Sale Quantity (a decadal ceiling on the amount of timber that can be supplied). This quantity was designed to meet market demands in Southeast Alaska, and to provide a significant contribution to Southeast Alaska’s employment and local community stability while meeting multiple-use resource [goals](#).

Market [demand](#) for Southeast Alaska’s timber is expected to remain high during the 1990’s. However, during the same period a decrease is likely in the timber supply from Native Corporation lands, potentially increasing the demand for Tongass National Forest timber to supply markets for wood products and maintain timber-related employment. At the same time, in recognition of the needs of some non-timber resources, and in response to [public issues](#), the maintenance or even reduction of the current [Allowable Sale Quantity](#) needs to be considered. Both higher and lower allowable sale quantities are evaluated.

6. **Monitoring and Evaluation.** The current Tongass Plan provides direction for monitoring and evaluation, primarily for monitoring development-related activities. A revised monitoring plan is needed to ensure that the revised [management prescriptions](#) and standards and guidelines are effective in achieving the desired results.

## Public Issues

Ten public issues were originally identified in 1988 for the Forest Plan Revision. These were used for the 1990 DEIS, and remained the same, with some updating, for the 1991 SDEIS. Each issue statement is framed as a question. These original issues are listed and briefly described here. The 1991 SDEIS added an additional concern, identifying and considering for recommendation potential Wild, Scenic, and Recreational Rivers.

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## The Ten Original Public Issues

**Scenic Quality.** What areas of the Tongass National Forest should be managed to emphasize scenic resources?

The Tongass National Forest is a unique combination of land and marine environments that provides outstanding ocean, mountain, and glacier scenery. Maintaining the scenic quality of the Forest landscape, and how this is to be achieved in combination with resource uses that alter natural landscapes, such as timber harvesting and road construction, is of concern to Forest visitors, individuals, groups, businesses, and communities. A specific interest for many are the views from the Alaska Marine Highway and cruiseship routes.

**Recreation.** What areas should be managed to emphasize recreation opportunities?

Outdoor recreation opportunities offered by the Tongass National Forest play an important role in the quality of life for the majority of Southeast Alaska residents. Many families have favorite places where they fish, hunt, beachcomb, hike, or just go to get away. Many non-residents visit the Tongass for these same opportunities. Forest management has the potential to alter some of these unique recreation settings, raising the question of the compatibility of activities such as timber harvesting with the recreation opportunities that these settings provide.

**Fish Habitat.** What methods should be used to protect resident and [anadromous fish](#) habitat?

The fisheries resource of the Tongass contributes significantly to the economic, recreational, and [subsistence](#) needs of residents and non-residents alike. Most of the salmon caught in the waters of Southeast Alaska and in the Gulf of Alaska originate in streams and lakes lying within the boundaries of the Tongass National Forest. Changes in stream habitat can alter a stream's ability to produce fish. The level of protection necessary to maintain or enhance the fisheries resource, while allowing other resource activities such as timber harvest, is the heart of this issue. (See also Fish Habitat under "The Five Focus Issues" below.)

**Wildlife Habitat.** What amount of [old-growth](#) and undeveloped habitat should be managed for the protection of wildlife?

The Tongass National Forest supports a wide variety of wildlife species, including the largest populations of brown bears and breeding bald eagles in the world. Alaskans and visitors engage in sport and [subsistence](#) hunting of moose, brown and black bears, mountain goat, and deer; many other species also provide the public with sport, commercial, and subsistence use opportunities. The demand for opportunities to watch and photograph wildlife is growing. The habitat needs of the wildlife species of the Tongass, the majority of which are associated with [old-growth](#) forests, must be integrated with the management of other resources, especially the timber resource. (See also Wildlife Viability under "The Five Focus Issues" below.)

**Subsistence.** What should the Forest Service do to continue providing subsistence opportunities?

For many rural Alaskans, [subsistence](#) means hunting, fishing, trapping, and gathering natural resources to provide needed food and supplement rural incomes. For Southeast Alaska's Native Americans, subsistence is that and more: a lifestyle that preserves customs and traditions reflecting deeply-held attitudes, values and beliefs. The subsistence issue revolves around ensuring subsistence opportunities and protecting traditional subsistence areas while managing for multiple resource

uses. The potential effects of continued logging on resources and places important to subsistence users is the main concern. Another concern is roads, which can provide new access opportunities, but can also result in competition among sport and subsistence users.

**Timber Harvest.** What areas of the Tongass should be managed to emphasize timber harvesting?

In the 1950s, establishing an Alaskan timber processing industry was encouraged to promote stable year-round employment. Since then, timber harvesting has been one of the principal uses of the Tongass. The issue of where to emphasize (or allow) timber harvest is many-faceted, and includes consideration of the compatibility of timber activities with other resource uses and needs, the identification of lands suitable for timber management, and the question of what is an appropriate, sustainable level of timber harvest, all in combination with the local economic importance of timber-related employment. (See also Alternatives to Clearcutting and Socioeconomic Considerations under “The Five Focus Issues” below.)

**Roads.** What road system should be developed in the Tongass National Forest?

The land transportation system in Southeast Alaska has evolved almost entirely from the need to [access](#) areas for timber harvest. Some of the roads linking island communities have more recently been upgraded and incorporated into the State Highway System, a trend expected to continue in the future. Roads have also become a popular means of [access](#) for recreation, hunting, and [subsistence](#) uses. On the other hand, roads can adversely affect scenic quality, wildlife habitat, unroaded recreation, and other aspects of a natural environment. Future road development will still be primarily in support of timber management. The benefits and drawbacks to extending the road system in the Tongass need to be analyzed.

**Minerals.** What areas and accessibility should be emphasized for exploration, development, and production of mineral resources?

The Tongass National Forest contains many important mineral resources, from precious metals to chemical-grade minerals. Mining and [mineral exploration](#) activities have occurred for over one hundred years. Today, along with new explorations, many historical mineral deposits are being revisited. This renewed interest in mining could, directly or indirectly, provide an increase in employment in Southeast Alaska. The identification of areas with high [mineral development](#) potential, and assuring development opportunities where appropriate, are major facets of this issue, as are the potential environmental effects of mineral development.

**Roadless areas.** What areas and what amount of roadless lands should be recommended for [Wilderness](#) Designation or other types of unroaded management?

Approximately 5.5 million acres of the Tongass were added to the National [Wilderness Preservation](#) System in 1980 by the Alaska National Interest Lands Conservation Act and another 0.3 million by the [Tongass Timber Reform Act](#) of 1990. TTRA also designated 0.7 million acres for perpetual LUD II management (see Chapter 2). Additional [roadless areas](#) have been identified by the public for consideration for similar non-development types of management. The issue centers on the question of how much roadless land to maintain in its natural

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condition, versus the development of these lands for their timber and mineral values.

**Local Economy.** What ways should National Forest lands be managed to provide for the local lifestyles of Southeast Alaska communities?

Dependency on the land and natural resources is an economic fact of life throughout much of Southeast Alaska. Employment and income generated by timber, fishing, mining, and tourism industries is critical to the social and economic well-being of most existing and emerging Southeast Alaska communities. Many individuals also rely on the [subsistence](#) use of Forest resources to provide needed food and supplement their income. For these reasons, management of the Tongass National Forest has been, and continues to be, closely tied to the issue of regional and community socioeconomic development and structure. But maintaining current employment, especially in the timber sector, will require the development of more areas of the Forest.

## The Five Focus Issues

The "need for change" portrayed the general purpose and need for doing the Revision. Addressing the ten issues just listed further defined the purpose and need for the 1990 DEIS and 1991 SDEIS. Part of the purpose and need of the 1996 Revised Supplement and this FEIS is to further address several issues that have continued to be of concern for the Tongass and are relevant to National Forest planning.

Since the release of and comment period on the 1991 SDEIS, considerable new information bearing on the Tongass Forest Plan Revision has come to light, including additional scientific reviews and studies, new or updated resource inventories, and comments and reports from interest groups and individuals. Out of this new information emerged five issues determined by the Regional Forester to need more study and evaluation before a final Revised Forest Plan could be adopted. Some of these issues are aspects or extensions of the ten [public issues](#) previously considered (fish and wildlife habitat, and the local economy), others are new as issues ([caves](#) and [karst](#)) or were not considered as issues in themselves (alternatives to clearcutting). Background on these issues is presented here (much of which, especially recent studies and assessments, is discussed in more detail in the relevant resource sections of Chapter 3). The new issues are not framed as questions as was done for issues previously.

### Wildlife Viability

The issue concerning wildlife viability centers on questions of whether the current Forest Plan, or the [alternatives](#) considered for revising the Forest Plan (in either the 1991 SDEIS or the unpublished 1992 Tongass Forest Plan Revision Final Environmental Impact Statement (FEIS)), provide for sufficient habitat to maintain viable wildlife populations in the Tongass National Forest within the context of overall multiple use objectives (as required by 36 [CFR](#) 219.19 and related NFMA regulations).

Early in 1993, the Alaska Regional Forester postponed a final decision on the Revised Forest Plan and requested the Forest Service's Pacific Northwest Research Station to conduct a scientific peer review of a viability strategy recommended by the Interagency Viable Population Committee, and other planning documents related to viability, as part of the Forest Plan Revision process. Results of this peer review were released in 1994 ("Review of the Wildlife Management and Conservation Biology on the Tongass National Forest: A Synthesis with Recommendations," March 1994). The peer review concluded that a strategy like



that recommended by the Committee went further in ensuring habitat to support viable wildlife populations than the Revision alternatives, but that other methods and approaches also need to be considered. It also noted a lack of information about wildlife in Southeast Alaska, and the need for more study.

Also in 1994, the Alaska Region of the U.S. Fish and Wildlife Service (USFWS) accepted two petitions for listing under the Endangered Species Act, for the Queen Charlotte goshawk (as endangered) and the Alexander Archipelago wolf (as threatened), in Southeast Alaska. In June 1994 a reserve strategy for maintaining habitats for viable wildlife populations was used in developing the [Fiscal Year 1994-95 timber sale/timber offerings schedule](#) for the Tongass. This was partly based on the recommendations of the Interagency Viable Population Committee, and also used preliminary information from an interagency goshawk meeting. After additional study, this scheduling effort was followed by the release of a draft Environmental Assessment for a proposed Forest Plan amendment to further address short-term habitat concerns related to wildlife viability ("Interim Habitat Management Guidelines for Maintaining Well-Distributed Viable Wildlife Populations within the Tongass National Forest," September, 1994). A second interagency meeting on the goshawk, in October 1994, used new inventory information to refine proposed goshawk habitat management guidelines.

During the first half of 1995, the USFWS announced decisions on the wolf and goshawk petitions. Neither species was found in need of listing at this time, but USFWS stated in both cases that without substantive changes in management of the Tongass, future viability was a definite concern. (Very recently legal challenges have resulted in the USFWS being required to reevaluate both these decisions.) The Forest Service and four other federal agencies have signed a [National Memorandum of Understanding \(MOU\)](#) for the conservation of species that may be considered for listing under the Act, and an emphasis on species tending toward listing. In addition, a similar MOU with similar purposes pertaining specifically to Alaska has recently been entered into between the Alaska Regions of the Forest Service and USFWS, and the State of Alaska Department of Fish and Game. Early and adequate conservation of candidate species may preclude the need for additional protection and listing. (For a review of Forest Service policy on [preservation](#) strategies and preventing the need to list under the ESA, see Capp 1996.)

### Fish Habitat

Concurrent with the work and actions taken relative to wildlife viability, in 1994 an Alaska [Anadromous Fisheries Habitat Assessment \(AFHA\)](#) was conducted, at the direction of Congress, for the purposes of studying the effectiveness of current procedures for protecting [anadromous fish](#) habitat, and determining if any additional protection was needed. This assessment concluded that current measures, and their implementation, were not fully effective for preventing habitat [degradation](#) or protecting salmon and steelhead stocks in the long term. AFHA included recommendations to consider for the Tongass Plan Revision, and additional recommendations were made by the team that conducted the on-the-ground analysis for AFHA.

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## Karst and Caves

The extent and importance of the cave resources of the Tongass have only recently come to light. The 1991 SDEIS considered caves, and included some recognition of the "karst" geology in which they are typically found, in [Forest-wide standards and guidelines](#), and through a proposed Karst Areas Geological Area. More recent studies and surveys, including a "Karst and Cave Resource Significance Assessment" (Aley et al., 1993) done for the Ketchikan Area, have indicated a more extensive resource of world-class significance, and the need to consider improved standards and guidelines. Several recent timber sale projects in karst areas have identified a similar need.

## Alternatives to Clearcutting

Commercial timber harvest in the Tongass National Forest has traditionally relied on one even-aged [silvicultural system](#), [clearcutting](#). This system has proven very successful in Southeast Alaska in several ways: it is relatively economical; it is effective in controlling forest diseases; it eliminates [blowdown](#); and it results in adequate natural [regeneration](#), particularly of less shade-tolerant species such as Sitka spruce. On the other hand, clearcutting continues to be controversial in Southeast Alaska. The principal objections are to the visual changes in the landscape, and potential adverse effects to streams, slope stability, and loss of [old-growth](#) forest, particularly as habitat for wildlife. Since the 1991 SDEIS the Forest Service's [Ecosystem management](#) policy has come out, which includes a strong emphasis on limiting the amount of traditional clearcutting, and on using alternative silvicultural systems.

## Socioeconomic Considerations

The socioeconomic environment of Southeast Alaska and its relation to the resources and uses of the Tongass has undergone some [significant changes](#) in recent years. Since the 1991 SDEIS, the timber industry has seen the permanent closure of one of two major pulp mills (the Alaska Pulp Corporation mill in Sitka), the development of several new small mill operations, and the termination in 1994 of one of two long-term sale contracts. In October 1996 the Louisiana Pacific Corporation announced its intent to close the sole remaining pulp mill in Southeast Alaska (the Ketchikan Pulp Company mill in Ketchikan) in March 1997. The need to address habitat for wildlife viability discussed above has led to some reductions in timber sale offerings, and other potential sales have been delayed through legal action.

The timber industry is not the only economic segment undergoing change. For instance, the tourism industry continues to see rapid growth, indicating the need to better reflect tourism needs and concerns through specific [management direction](#) and improved inventories. An extensive update of the social and economic settings and concerns of the 30+ Southeast Alaska communities became necessary in order to have the best information on local uses of, and economic ties to, the Tongass, and to better understand what each community itself desires from the Tongass National Forest.



## Organization of the Document

This final environmental impact statement is organized into several chapters and a number of appendices. Chapter 1, “Purpose and Need,” describes the reasons for proposing and completing a plan revision. Chapter 2, “Alternatives,” describes the process used to develop alternatives, explains what the components of a Forest Plan are, discusses alternatives not considered in detail, and then describes in detail a Preferred Alternative and nine other alternatives. Chapter 2 also includes comparisons of these alternatives based on the issues and significant environmental effects.

The discussions of the “Affected Environment” and the “Environmental Consequences” are combined in Chapter 3, “Environment and Effects.” This is done so that the environmental consequences (effects) of the alternatives on forest resources, and the background information needed to understand these consequences, are discussed together for each resource. The focus is on significant effects, with the analysis centered on the [public issues](#). The chapter begins with a general description of the Tongass National Forest.

The FEIS also includes a list of preparers, a list of agencies, organizations and persons receiving copies of the document, a bibliography, and a glossary (Chapters 4 through 7), and an index. Appendices, contained in separate volumes, give more background on planning actions (such as identifying issues), certain resources (such as [roadless areas](#)), and analysis and modeling techniques. An additional appendix summarizes all substantive public comments received on all Revision drafts (1990 DEIS, 1991 SDEIS, 1996 Revised Supplement), and provides Forest Service responses to these comments.

A separate document, the Land and Resource Management Plan, is a complete exposition of the Preferred Alternative (Alternative 11) in this FEIS. It includes a Plan map, goals and objectives, the [management prescriptions](#) for 19 [Land Use Designations](#), lands suitable for timber management and an [Allowable Sale Quantity](#), [Forest-wide standards and guidelines](#), plan implementation direction, and a [monitoring](#) and [evaluation](#) plan. Proposed resource schedules are presented in a Plan appendix.

Additional information, maps and reference documents used in the Tongass National Forest Land Management Plan revision process are contained in the planning record. These may be reviewed at the Tongass Plan Revision Team Office, 8505 Old Dairy Rd., Juneau, Alaska, during regular business hours. The planning record in its entirety is incorporated here by reference.

## Forest Location and Description

The 17-million acre Tongass National Forest is located in Southeast Alaska, a part of the Alexander Archipelago, and occupies about seven percent of the State’s area. The Tongass extends from Dixon Entrance in the south to Yakutat in the North, and is bordered on the east by Canada and on the west by the Gulf of Alaska. It extends approximately 500 miles north to south, and approximately 120 miles east to west at its widest point. Figure 1-1 is a vicinity map of the Tongass.

The Tongass includes a narrow mainland strip of steep, rugged mountains and icefields, and over one thousand offshore islands. Together, the islands and mainland equal nearly 11,000 miles of meandering shoreline, with numerous bays and coves. A system of seaways separates the many islands and provides a protected waterway called the Inside Passage. Federal lands comprise about 95 percent of Southeast Alaska, with about 80 percent in the Tongass National Forest (and most of the rest in Glacier Bay National Park and Preserve). The remaining land is held in State, Native and private ownerships.

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Most of the area of the Tongass is wild and undeveloped. About 65,000 people inhabit Southeast Alaska, most living in 33 communities located on island or mainland coasts. Only eight of the communities have populations greater than 1,000 persons. Most of these communities are surrounded by, or adjacent to, National Forest land. Just three towns are connected to other parts of the mainland by road: Haines and Skagway to the north, and Hyder to the south.

The economies of Southeast Alaska's communities are largely dependent on the Tongass National Forest to provide natural resources for uses such as fishing, timber harvesting, recreation, tourism, mining and [subsistence](#). Maintaining the abundant natural resources of the Forest while also providing opportunities for their use is a major concern of Southeast Alaska residents.

Because of its immense size, the Tongass National Forest is divided into three Administrative Areas, each with its own Forest Supervisor: the Chatham Area with its Supervisor's Office at Sitka, the Stikine Area with its Supervisor's Office at Petersburg, and the Ketchikan Area with its Supervisor's Office in Ketchikan (see Figure 1-1). There are nine Ranger Districts, with offices in Yakutat, Juneau, Hoonah, Sitka, Petersburg, Wrangell, Thorne Bay, Craig, and Ketchikan. There are also two National Monuments, Admiralty Island and Misty Fjords, with offices in Juneau and Ketchikan.

Figure 1-1

